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EXAMINER

JONES, HEATHER RAE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/083,676	Applicant(s) COVELL ET AL.	
	Examiner HEATHER R. JONES	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-21 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 22-52 is/are rejected.
- 7) ☒ Claim(s) 10-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 2, 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed April 2, 2008 have been fully considered but they are not persuasive.

The Applicant argues that Dimitrova et al. fails to disclose a sequence of blank frames, thereby disclosing a blank segment. The Examiner respectfully disagrees. Dimitrova et al. discloses a segment of 10-30 frames being blank, therefore disclosing a blank segment (col. 18, lines 45-52). Furthermore, the claims do not specify a number to declare a sequence of blank frames a segment, but only states a plurality of frames constitutes a segment. Also the application's specification states that a segment contains at least 30 frames, which would include Dimitrova et al.'s sequence of 30 frames thereby making it a segment. Therefore, Dimitrova et al. meets the claimed limitations and the rejection is maintained.

The Applicant argues that Dimitrova et al. fails to disclose a plurality of blank frame detectors. The Examiner respectfully disagrees. Dimitrova et al. discloses in Fig. 2 a processor (57) comprising a cut detector thread (82) that determines if a frame is either a black frame, a cut frame, or a snow-static frame and a filter thread (84) that determines if the frame is a unicolor blank frame. Therefore, Dimitrova et al. discloses more than one blank frame detector which meets the limitation of having a plurality of blank frame detectors and the rejection is maintained.

The Applicant argues that Dimitrova et al. fails to disclose that the blank frame detector is adapted to identify blank frames of multiple types. The Examiner respectfully disagrees. Dimitrova et al. discloses this feature in a couple of different ways. The first way is black frames and unicolor frames are detected by the blank frame detectors and the other way is that the cut detector thread (82) determines if a frame is a black frame, a cut frame, or a snow-static frame (Fig. 5). Therefore, Dimitrova et al. meets the claimed limitations and the rejection is maintained.

The Applicant argues that Dimitrova et al. fails to disclose a blank frame detector which makes use of color information for individual pixels to determine whether a frame is a blank frame. The Examiner respectfully disagrees. Dimitrova et al. discloses in Figs. 3A-3D and 10 a process where the DCT coefficients are produced and are in the same location as where the pixels were (col. 8, lines 21-37). Therefore, each DCT coefficient is representative of a pixel,

which means Dimitrova et al. takes the color of each individual pixel into consideration when calculating the DCT coefficients and the DCT coefficients are considered when a frame is considered to be a blank frame. Therefore, Dimitrova et al. meets the claimed limitations and the rejection is maintained.

The Applicant argues that Dimitrova et al. fails to disclose determining whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content and that includes one or more blank frames of a first type and one or more blank frames of a second type that is different from the first type. The Examiner respectfully disagrees. As stated above the cut detector thread (82) determines if a frame is a black frame, a cut frame, or a snow-static frame (Fig. 5), which constitute two different blank frame types. Furthermore, Dimitrova et al. discloses in col. 18, lines 45-52 a segment of black and cut frames which meets the claimed limitations and the rejection is maintained.

The Applicant argues that Dimitrova et al. fails to disclose a blank segment that is all or nearly all one color. The Examiner respectfully disagrees. Furthermore, Dimitrova et al. discloses in col. 18, lines 45-52 a segment of black frames which would make the segment all or nearly all one color. Therefore, Dimitrova et al. meets the claimed limitations and the rejection is maintained.

The Applicant argues that Dimitrova et al. fails to disclose determinations are made for successive frames of visual recording data as the frames of visual recording data are acquired. The Examiner respectfully disagrees. Dimitrova et

al. discloses identifying the occurrence of a black frame based on the step of comparing the average maximum and minimum luminance values with a black frame threshold (col. 2, lines 10-22). To determine the occurrence of black frames all frames would need to be considered therefore successive frames are examined and Dimitrova et al. meets the claimed limitations and the rejection is maintained.

The Applicant argues that Dimitrova et al. fails to disclose means for using the detection of one or more blank segments to identify one or more segment boundaries in the set of visual recording data. The Examiner respectfully disagrees. Dimitrova et al. discloses using blank segments to determine the beginning and ending (boundaries) of commercials in the video stream (col. 3, lines 41-46; col. 18, lines 45-52). Therefore, Dimitrova et al. meets the claimed limitations and the rejection is maintained.

3. Applicant's arguments with respect to claims 17 and 19 have been fully considered and are persuasive. The rejection of claims 17 and 19 has been withdrawn.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-9, and 22-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Dimitrova et al. (U.S. Patent 6,100,941).

Regarding claim **1**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a plurality of blank frame detectors, each blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame (Figs. 2 and 5; col. 5, lines 47-65); and a blank segment detector, the blank segment detector adapted to receive input from the plurality of blank frame detectors regarding a plurality of frames of visual recording data to evaluate a characteristic of a plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content (col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col.18, lines 36-52).

Regarding claim **2**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 1 including that the plurality of blank frame detectors comprise first and second blank frame detectors (Fig. 5); the first blank frame detector is adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame of a first type; and the second blank frame detector is adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a

blank frame of a second type, the second type being different from the first type (Figs. 2 and 5; col. 5, lines 47-65).

Regarding claims **3-6**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 1 including that at least one of the plurality of blank frame detectors is adapted to detect frames of visual recording data that represent an image that is all or nearly all one color, all or nearly blue or purple, all or nearly all silver, or all or nearly all black (Fig. 6A; col. 2, line 65 – col. 3, line 9).

Regarding claim **7**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 1 as well as the apparatus further comprising means for evaluating a determination that a frame of visual recording data is a blank frame to either confirm or reject the determination (Figs. 2 and 5; col. 5, line 66 – col. 6, line 10).

Regarding claim **8**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame, and, if so, whether the blank frame is of a first type or of a second type that is different from the first type (Figs. 2 and 5; col. 5, lines 47-65); and a blank segment detector, the blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of a plurality of frames of visual recording data to

determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content (col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **9**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame representing an image that is all or nearly all one color (Figs. 2 and 5; col. 5, lines 47-65), wherein the blank frame detector further comprises: means for determining if, for each color component, the numerical value of a specified number of the pixels of the frame is within a specified magnitude of the average numerical value of that color component for all of the pixels of the frame; and means for determining if the average numerical value of each color component for all of the pixels of the frame is within a specified range and/or has a specified relationship with the average numerical value of one or more other color components, wherein: if, for each color component, the numerical value of the specified number of the pixels of the frame is within the specified magnitude of the average numerical value of that color component for all of the pixels of the frame, and if the average numerical value of each color component for all of the pixels of the frame is within a specified range and/or has a specified relationship with the average numerical value of one or more other color components, then the frame is a blank frame (Fig. 6A; col. 6, lines 40-52); and a blank segment

detector, the blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of the plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content (col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **22**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame (Figs. 2 and 5; col. 5, lines 47-65); and a plurality of blank segment detectors, each blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of the plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content (col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **23**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 22 including that the plurality of blank segment detectors comprise first and second blank segment detectors; the first blank segment detector is adapted to detect blank segments including blank frames of a first type; and the second blank segment detector is adapted to

detect blank segments including blank frames of a second type, the second type being different from the first type (Figs. 2 and 5; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **24**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame (Figs. 2 and 5; col. 5, lines 47-65); and a blank segment detector, the blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of a plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content and that includes one or more blank frames of a first type and one or more blank frames of a second type that is different from the first type (Figs. 2 and 5; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **25**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 24 including that the blank segment detector is adapted to detect a first type of blank segment including blank frames of a first type, or a second type of blank segment including blank frames of a second type that is different from the first type of blank frames (Figs. 2 and 5; col.

5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **26**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame (Figs. 2 and 5; col. 5, lines 47-65); and a blank segment detector, the blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of a plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content that is all or nearly all one color (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claims **27-29**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 26 wherein the blank segment detector is adapted to detect blank segments including blank frames that represent an image that is all or nearly all blue or purple, all or nearly all silver, or all or nearly all black (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **30**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 26 including that the blank segment

detector further comprises means for determining if there are a specified number of frames in a sequence of frames that have been determined to be blank frames of the same color, wherein if there are a specified number of frames in the sequence of frames that have been determined to be blank frames of the same color, then the segment is a blank segment (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **31**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 26 and 30 including that the specified number of frames is 95% of the frames in the sequence of frames after the first 6 frames in the sequence of frames (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **32**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 26 and 30 including that the blank segment detector further comprises means for determining if the blank frames of the same~ color in the sequence of frames differ in color by no more than a specified amount, wherein if there are a specified number of frames in the sequence of frames that have been determined to be blank frames of the same color and the blank frames of the same color in the sequence of frames differ in color by no more than a specified amount, then the segment is a blank segment (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **33**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 26, 30, and 32 including that the specified amount is a variance of the average color of the frames of the same color of less than 10 (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **34**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a snow-static frame (Figs. 2 and 5; col. 5, lines 47-65); and a blank segment detector, the blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of the plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to record visual content that that is all or nearly all snow-static (Figs. 2, 5 – step “553”, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **35**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 26 including that the blank segment detector further comprises means for determining if there are a specified number of frames in a sequence of frames that have been determined to be snow-static frames, wherein if there are a specified number of frames in the sequence of

frames that have been determined to be snow-static frames, then the segment is a blank segment (Figs. 2, 5 – step “553”, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **36**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 26 and 30 including that the specified number of frames is 95% of the frames in the sequence of frames after the first 6 frames in the sequence of frames (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **37**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 36 including the blank frame detector is adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a black frame; and that the blank segment detector further comprises: means for determining if a specified number of frames in the sequence of frames have been identified either as black screen frames or snow-static frames; means for determining if the black screen frames in the sequence of frames differ in color by no more than a specified amount, wherein: if there are a specified number of frames in a sequence of frames that have been determined to be snow-static frames, a specified number of frames in the sequence of frames have been identified either as black screen frames or snow-static frames, and the black screen frames in the sequence of frames differ in color by no more than a specified amount, then the segment is a blank

segment (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **38**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 36 and 37 including that the specified number of snow-static frames in the sequence of frames is 5; the specified number of frames is 95% of the frames in the sequence of frames after the first 6 frames of the sequence of frames; and the specified amount is a variance of the average color of the black frames of less than 10 (Figs. 2, 5, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67 – detecting frames in real time at 30 frames/sec, therefore they are detecting 30 frames/sec corresponding to a segment).

Regarding claim **39**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame (Figs. 2 and 5; col. 5, lines 47-65); and a blank segment detector, the blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of the plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content, wherein: the blank frame and blank segment determinations are made for successive frames of visual

recording data as the frames of visual recording data are acquired or as the frames of visual recording data are being processed for another purpose (Figs. 2, 5 – step “553”, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **40**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 39 as well as further comprising means for communicating a categorization of a current segment to another process operating on the set of visual recording data (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **41**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 39 and 40 including that the set of visual recording data is initially in an analog form and the other process is a digitization process (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **42**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 39-41 including that the means for communicating a current segment categorization further comprises means for communicating the duration of a current blank segment to the digitization process; and the digitization process can be terminated if the duration of the current blank segment exceeds a specified duration (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **43**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 39 and 40 including that the means

for communicating a current segment categorization further comprises: means for identifying the beginning of a first content segment in the set of visual recording data; and means for communicating the identification of the beginning of the first content segment to the other process operating on the set of visual recording data (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **44**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 39, 40, and 43 including that the other process is a process for recording the set of visual recording data onto a data storage medium; and visual recording data is not recorded onto the data storage medium until the identification of the beginning of the first content segment is communicated to the recording process (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **45**, Dimitrova et al. discloses an apparatus for identifying a blank segment in a set of visual recording data, comprising: a blank frame detector, the blank frame detector adapted to evaluate a frame of visual recording data to determine whether the frame of visual recording data is a blank frame (Figs. 2 and 5; col. 5, lines 47-65); a blank segment detector, the blank segment detector adapted to receive input from the blank frame detector regarding a plurality of frames of visual recording data and to evaluate a characteristic of the plurality of frames of visual recording data to determine whether the plurality of frames of visual recording data is a blank segment that does not correspond to recorded visual content; and means for using the

detection of one or more blank segments to identify one or more segment boundaries in the set of visual recording data, each segment boundary delineating a transition from a segment of one type to a segment of another type (Figs. 2, 5 – step “553”, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **46**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 45 as well as the apparatus further comprising: means for identifying a segment boundary at the beginning of a blank segment; and means for marking the identified segment boundary to cause the blank segment following the identified segment boundary to be excluded from subsequent interaction with the set of visual recording data (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **47**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 45 and 46 including that the set of visual recording data is used to generate a display of the corresponding recorded visual content, a display of the recorded visual content corresponding to the marked segment not being generate (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **48**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claims 45 and 46 including that the set of visual recording data is processed in a specified manner, the visual recording

data in the marked segment not being processed (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **49**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 45 as well as the apparatus further comprising: means for identifying a segment boundary at the beginning of a blank segment; and means for deleting the visual recording data in the blank segment from the set of visual recording data (col. 15, line 26 – col. 16, line 46 - commercial detection).

Regarding claim **50**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 45 as well as the apparatus further comprising: means for determining the duration of a blank segment; and means for identifying the end of recorded visual content in the set of visual recording data as the beginning of a blank segment having greater than a specified duration (Figs. 2, 5 – step “553”, and 6A; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Regarding claim **51**, this is a method claim corresponding to the apparatus claim 8. Therefore, claim 51 is analyzed and rejected as previously discussed with respect to claim 8.

Regarding claim **52**, this is a computer readable medium claim corresponding to the apparatus claim 8. Therefore, claim 52 is analyzed and rejected as previously discussed with respect to claim 8.

Regarding claim **53**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 41 including that the blank frame detector is adapted to evaluate, if a frame is determined to be a blank frame, whether the frame is a blank frame of a first type or a blank frame of a second type that is different from the first type (Figs. 2 and 5; col. 5, lines 47-65).

Regarding claim **54**, Dimitrova et al. discloses all the limitations as previously discussed with respect to claim 41 including that the blank segment detector is adapted to determine, if the plurality of frames of visual recording data is determined to be a blank segment, whether the blank segment includes one or more blank frames of a first type and one or more blank frames of a second type that is different from the first type (Figs. 2 and 5; col. 5, lines 47-65; col. 2, line 65 – col. 3, line 9; col. 13, lines 51-67; col. 18, lines 36-52).

Allowable Subject Matter

6. Claims 17-21 are allowed.
7. The following is an examiner's statement of reasons for allowance: Prior art fails to teach or fairly suggest an apparatus for identifying a blank segment in a set of visual recording data:
 - a. means for determining if the vertical and horizontal correlation coefficients are within corresponding specified ranges and/or have a specified relationship with one another, wherein: if the specified maximum variation from pure gray at each pixel is less than a specified magnitude, the average numerical value of

each color component for all of the pixels of the frame is within a specified range and/or has a specified relationship with the average numerical value of one or more other color components, and the vertical and horizontal correlation coefficients are within corresponding specified ranges and/or have a specified relationship with one another, then the frame is a snow-static frame (independent claim 17).

b. means for evaluating, when a frame is determined to be a snow-static frame, the temporal correlation coefficient over a specified window of frames of visual recording data that includes the snow-static frame to either confirm or reject the determination that the frame is a snow-static frame (independent claim 19).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Claims 10-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to teach or fairly suggest an apparatus for identifying a blank segment in a set of visual recording data:

- a. Wherein the numerical value of each color component of each pixel can vary between 0 and 255 inclusive; the specified number of pixels is greater than or equal to 80% of the pixels; and the specified magnitude is 8 (claim 10, claims 11-16 all depend from claim 10).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEATHER R. JONES whose telephone number is (571)272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner
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HRJ
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